



City of Manchester, New Hampshire Manchester Water Works

Bond Rating Presentation

Water Revenue Bonds, Series 2003

July, 2003

Participants



Robert A. Baines, *Mayor, & Water Commissioner*

Kevin Clougherty, *Finance Officer, City of Manchester*

Randy Sherman, *Deputy Finance Officer, City of Manchester*

Joanne Shaffer, *Second Deputy Finance Officer, City of Manchester*

Thomas Bowen, *Director, Manchester Water Works*

Robert Beaurivage, *Assistant Director, Manchester Water Works*

Philip Croasdale, *Financial Administrator, Controller*

David Paris, *Water Supply Administrator*

Joseph Ridge, *Vice President, Camp Dresser & McKee ("CDM")*

June Matte, *Managing Director, Public Financial Management*

Arthur Spector, *Managing Director, Bear, Stearns & Co. Inc.*



CDM



The City is ...

- financially strong and vibrant
- growing in population and employment
- strong through its diversity in business and people
- stable in terms of its largest employers and taxpayers
- stable in terms of its senior management staff in both the Finance Department and at Manchester Water Works

The City is committed to...

- protecting the environment
- financial planning and has demonstrated a positive record of conservative financial operations
- maintaining a proven track record of completing major capital projects on time and under budget
- providing a modern, efficient infrastructure to support the local and regional economy
- operating enterprises that are profitable, well managed and well maintained
- maintaining a debt position that is moderate, with rapid pay-out and with the major portion being self supporting, at reasonable rates

The City believes...

- based upon financial planning and operational discipline, that it is the perfect time for major infrastructure investment
 - low borrowing rates
 - low and extremely competitive construction/project costs
 - great economic return on investment (economic stimulus)

The City believes MWW is...

- a mature and disciplined operation
- ideally situated for its initial revenue bond offering
 - experienced, professional management TEAM
 - low competitive and manageable rates
 - sound infrastructure base
 - financially well managed as exhibited through their financial results and, like the City, the formal adoption of fiscal policies and procedures
- supported by experienced City staff and a strong team of consultants for this exciting initiative
 - engineers
 - financial advisors
 - underwriters
 - legal

Overview of Manchester Water Works



Largest and Oldest Municipal Water Utility in NH

- Manchester Water Works was established in 1871 by the NH State Legislature and operates as an Enterprise Department of the City of Manchester
- MWW operates under the direction of a seven member Board of Water Commissioners (“Board”), appointed by the Mayor and Aldermen, with the Mayor serving on the Board ex officio

MWW is a Regional Utility

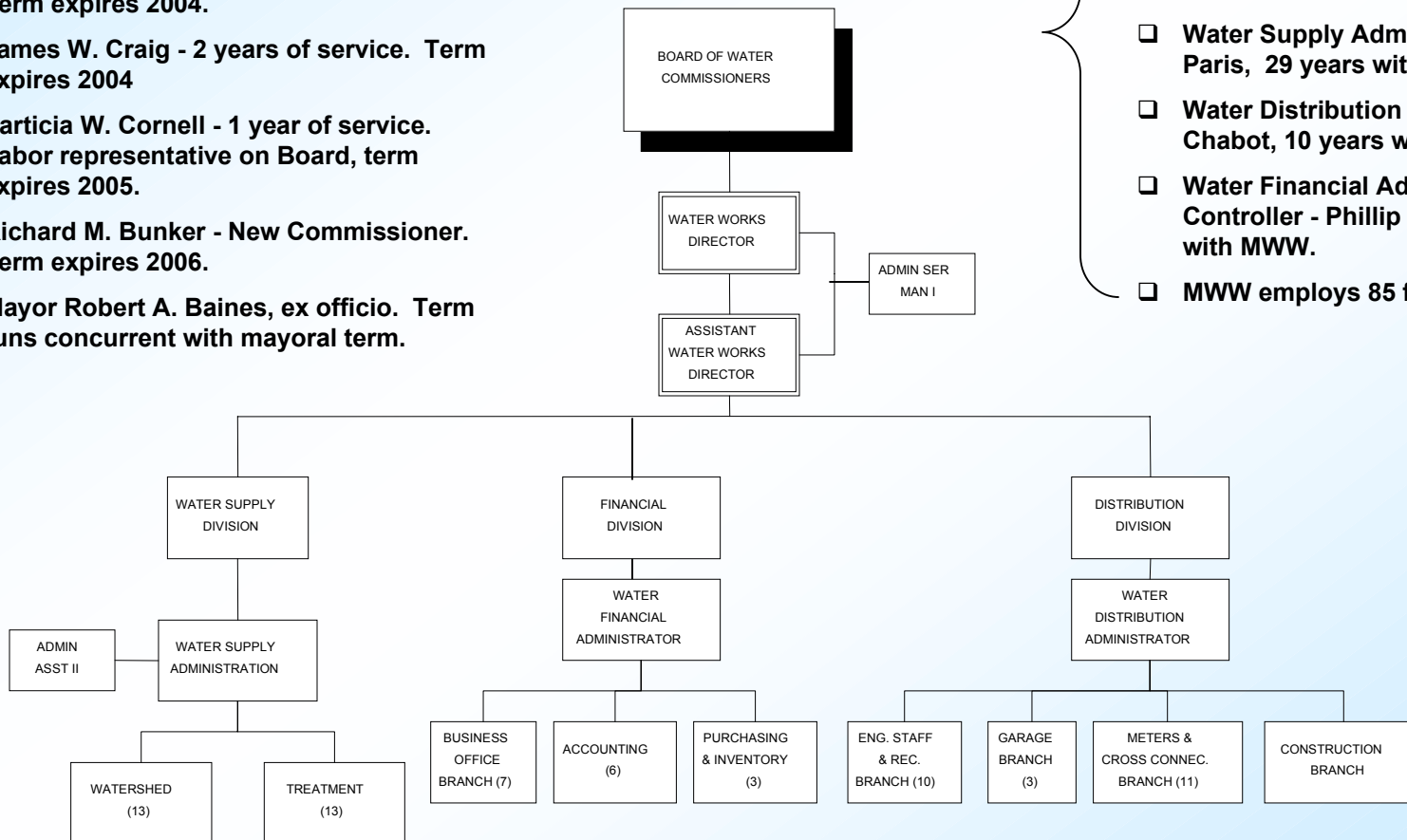
- Services a retail population of 115,000 over an area of nearly 55 square miles
- Provides wholesale water to four wholesale customers who in turn distribute water to an additional 25,000 people
- Its 28,000 service connections includes residential, commercial, industrial and wholesale customers
- MWW also provides Municipal Fire Protection within its service area

MWW's Management Team

Board of Directors

- ❑ C. Arthur Soucy - President, 17 years of service. Term expires in 2006
- ❑ Raymond W. Provencher - 10 years of service. Term expires 2005.
- ❑ Donald P. Couturier - 2 years service. Term expires 2004.
- ❑ James W. Craig - 2 years of service. Term expires 2004
- ❑ Patricia W. Cornell - 1 year of service. Labor representative on Board, term expires 2005.
- ❑ Richard M. Bunker - New Commissioner. Term expires 2006.
- ❑ Mayor Robert A. Baines, ex officio. Term runs concurrent with mayoral term.

Manchester Water Works

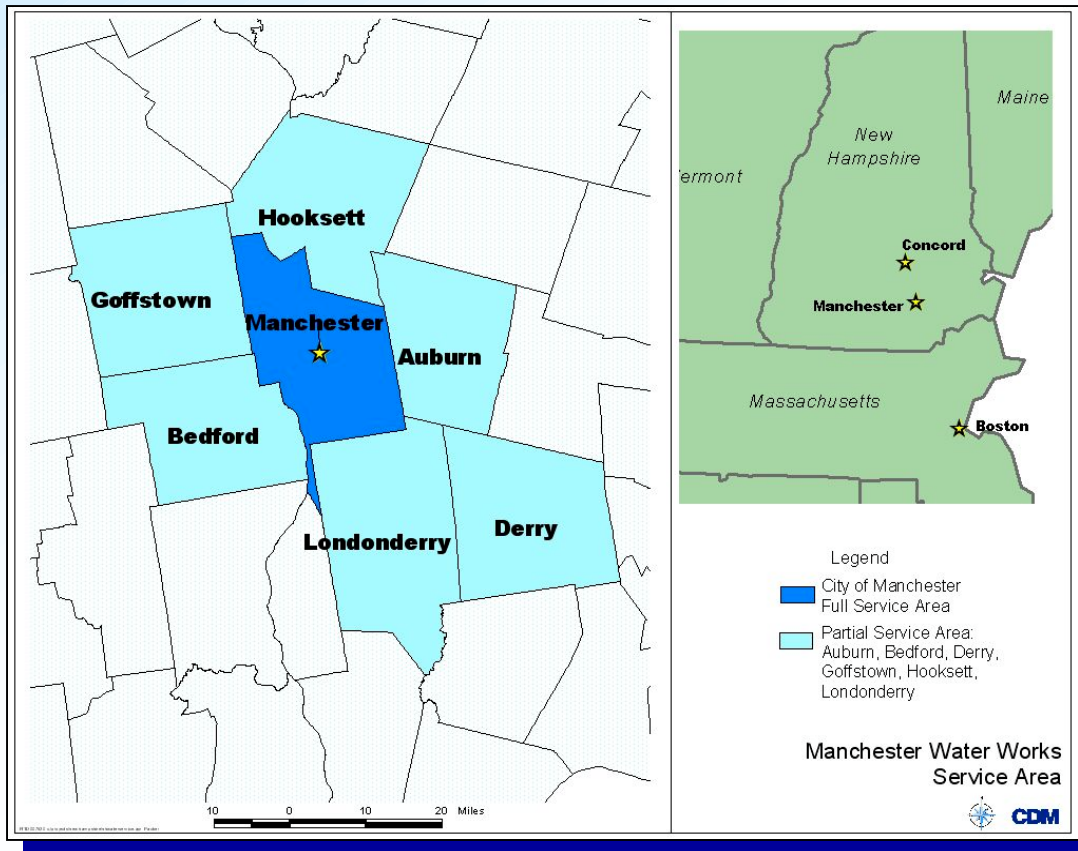


Management Team

- ❑ Water Works Director - Thomas Bowen, 33 years with MWW
- ❑ Assistant Water Works Director - Robert Beaurivage, 33 years with MWW.
- ❑ Water Supply Administrator - David Paris, 29 years with MWW.
- ❑ Water Distribution Administrator - Guy Chabot, 10 years with MWW.
- ❑ Water Financial Administrator Controller - Phillip Croasdale, 10 years with MWW.
- ❑ MWW employs 85 full time employees

Manchester Water Works Service Area

MWW provides retail service to an area of approximately 55 sq. miles with an approximate population of 115,000

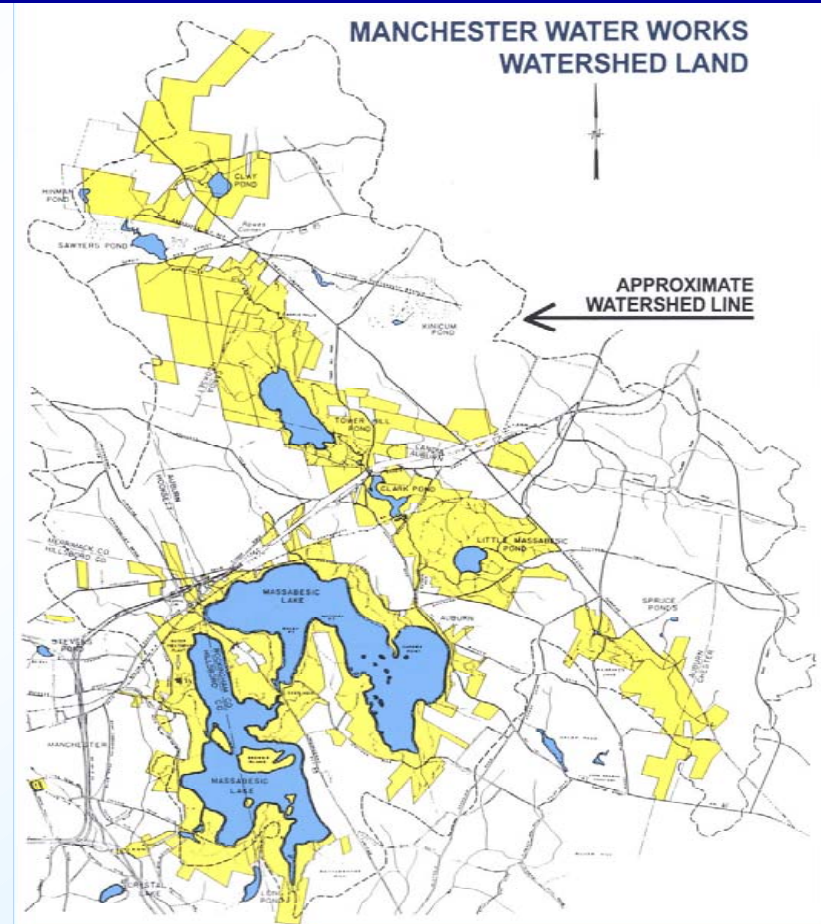


- Retail Distribution Area
 - City of Manchester
 - Serves portions of Auburn, Bedford, Goffstown, Hooksett, Londonderry
- MWW serves a combined population of 140,000 on a retail and wholesale basis
- Wholesale Distribution covers an additional 25 sq. miles and includes
 - Central Hooksett Water
 - Grasmere Precinct
 - Derry Water Works
 - Pennichuck Water Works

Greater Manchester's Source of Supply is Lake Massabesic, a 2,500 Acre Lake Located on the Manchester - Auburn Town Line

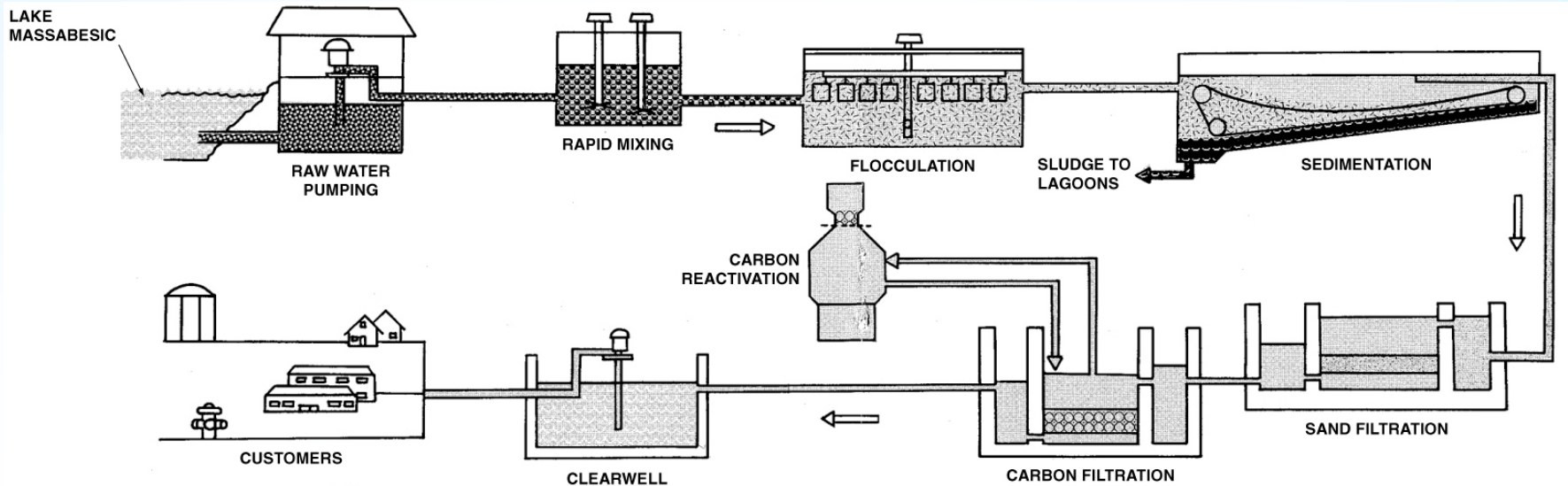
MWW owns 96% of the shoreline and over 8,000 acres within the watershed of Lake Massabesic, the principal source of water for MWW's customers

- Lake Massabesic has usable storage of 5.6 billion gallons and gross storage capacity of 15 billion gallons
- Average consumption is approximately 17.4 mgd with maximum consumption of 31.2 mgd
- Additional sources of water currently includes
 - Tower Hill Pond with 1.3 billion gallons of storage capacity



Existing Lake Massabesic Water Treatment Plant

- Constructed 1974
- Conventional Treatment Process with Carbon Filtration



Water Treatment

Lake Massabesic Treatment Plant continues to produce drinking water which meets or exceeds all federal and state drinking water standards



- Lake Massabesic Water Treatment Plant
 - Operational since 1974
 - Hydraulic capacity of 40 million gallons per day (“mgd”)
 - Average delivery of 17.4 mgd
 - Reliable capacity of 30 mgd
 - Redundant low lift intake capacity

Pumping stations and storage reservoirs are well maintained with sufficient capacity to meet MWW’s service area requirements

- Four major boosting pumping stations, capacities range from 3 to 10 million gallons per day
- Six potable water storage reservoirs providing total storage capacity of 37.8 million gallons
 - Sufficient to supply 2.2 days of finished water demand



Results of 2001 CDM Treatment Plant Benchmark Study

Figure 6-9
Annual O&M Cost per Average MGD

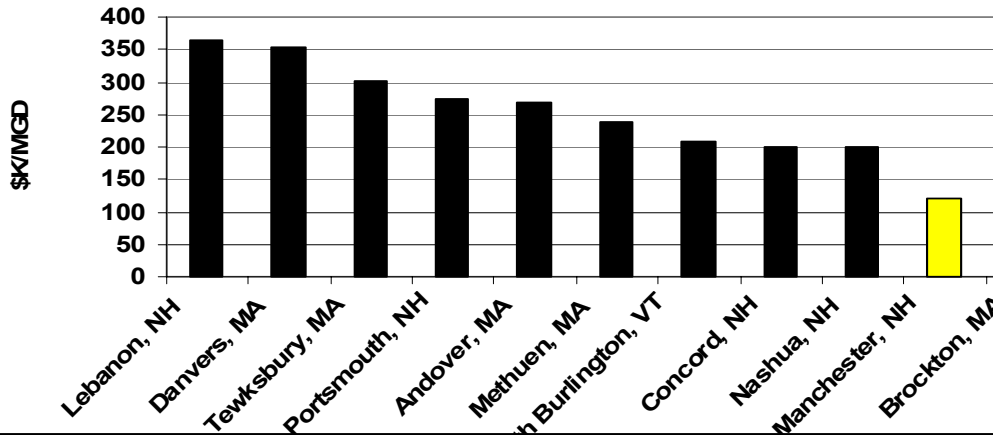


Figure 6-7
Overtime Utilization

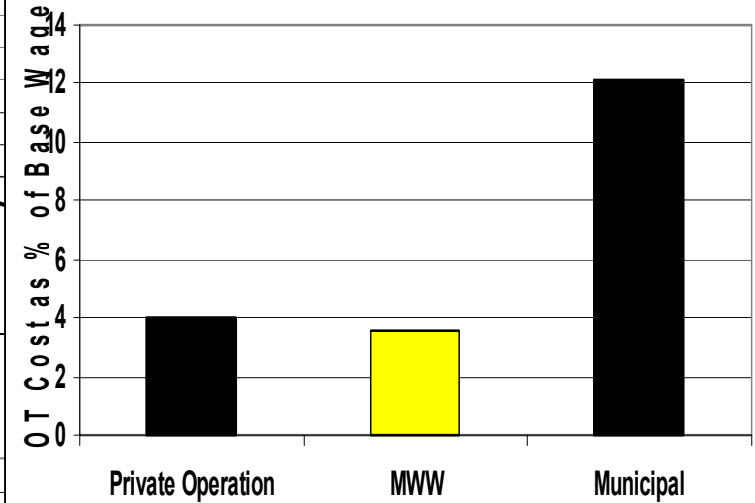
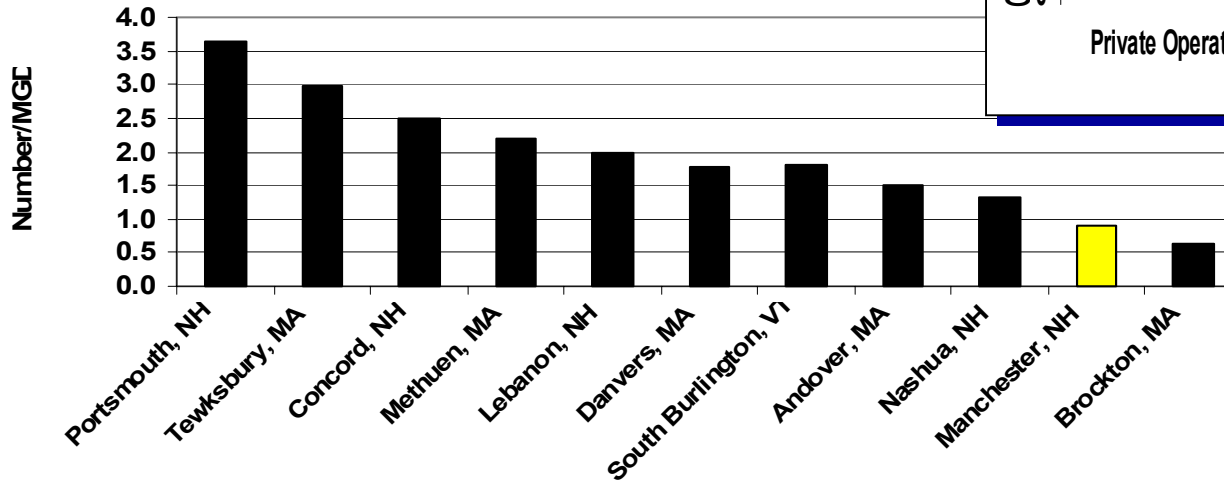
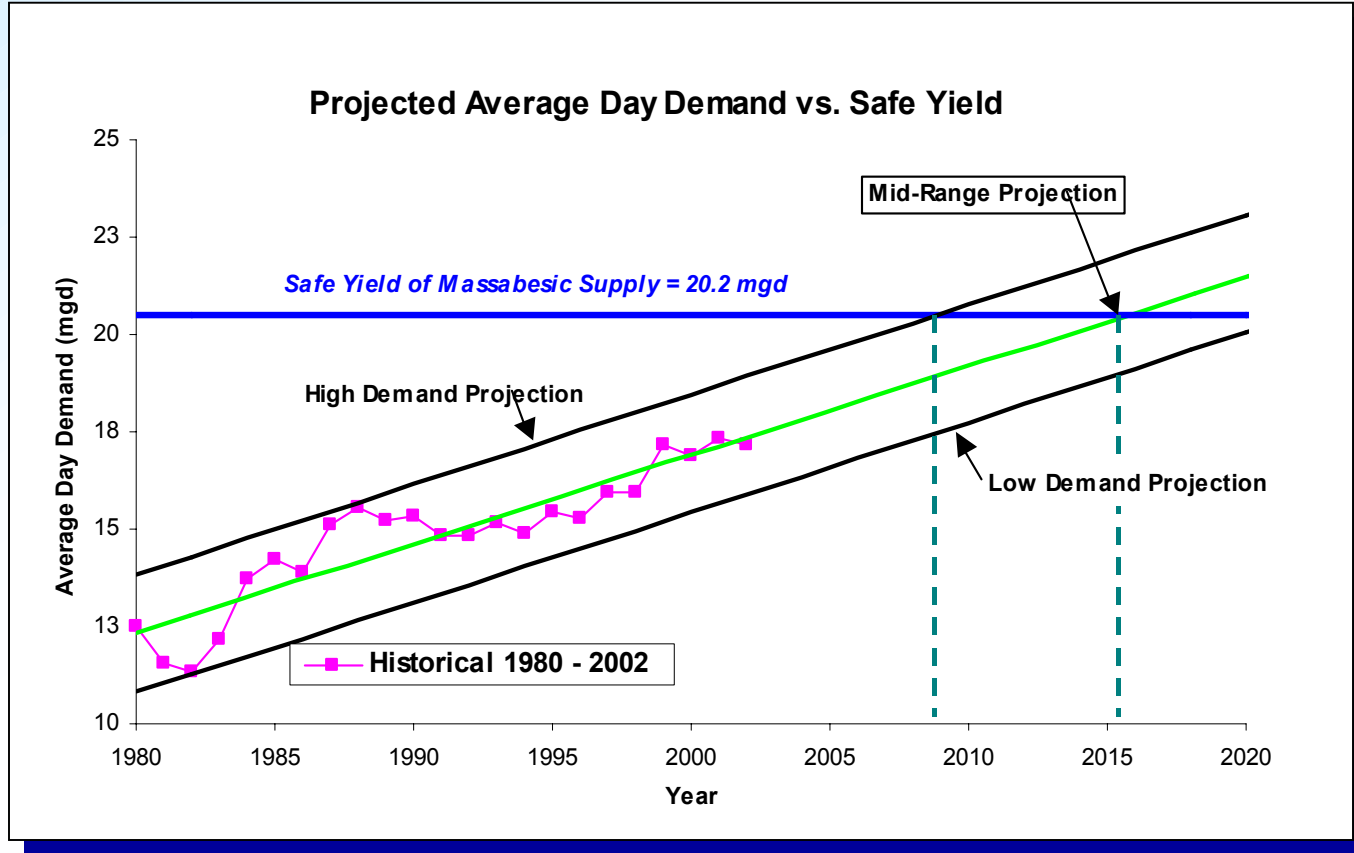


Figure 6-12
Employees per Average MGD



Demand for Water

- Since 1980, average daily demand has increased by more than 30% to 17.4 mgd



- Demand is expected to exceed the safe yield of Lake Massabesic by 2015 when the Merrimack River Supply will be needed

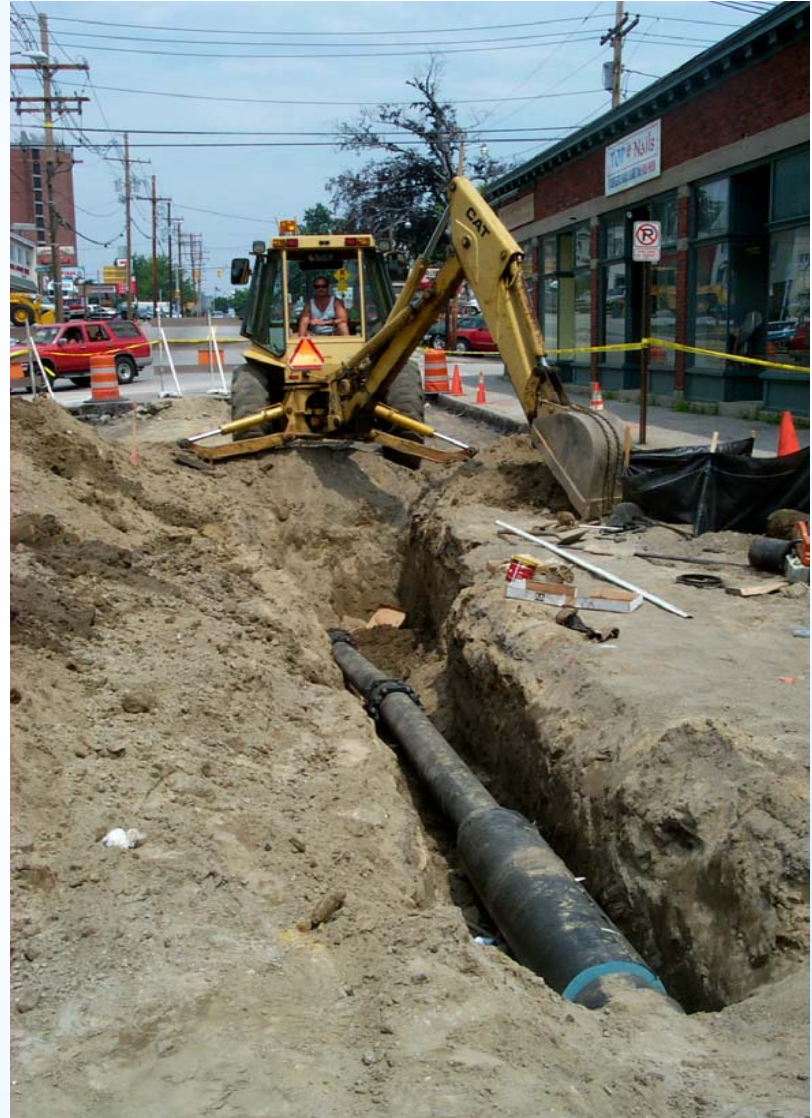
Future Water Supply Project

- Additional Water Supply needs for the Greater Manchester Area will be met by supplementing Lake Massabesic with water from the Merrimack River
- Engineers estimate that additional capacity will be needed within 10 years
- MWW began planning shortly after the “100 year drought” of 1964-65
- Conceptual plans call for a second treatment plant, located north of the Amoskeag Dam in proximity to large diameter high pressure mains
- Permitting, design and construction of the facility could take as long as 5 years
- MWW will begin this process when average daily consumption reaches 19 mgd (the “safe yield” of Lake Massabesic is 20.5 mgd)
- Merrimack Source Development Charge (“MSDC”) in place

DISTRIBUTION INFRASTRUCTURE

- 478.5 miles Water Main from 4" - 48"
- 9,700 Control Valves
- 3,200 Fire Hydrants
- 28,000 Domestic Water Services
- 1,300 Fire Sprinkler Services
- 28,000 Water Meters

MWW's accounted for water in 2002 was at 96.6% with 85% as the industry standard



WATER DISTRIBUTION – Programs in place for 30+ years

- MAIN FLUSHING PROGRAM - complete biennial system flushing
- HYDRANT INSPECTION PROGRAM - complete biannual inspection
- VALVE EXERCISING PROGRAM - approx 25% of small valves and 50% of large valves completed annually
- METER EXCHANGE PROGRAM - all residential meters exchanged every 4 - 10 yrs; large meters > 2" field tested annually
- LEAK DETECTION SURVEY - 20% - 25% of system annually
- RECORD KEEPING - Automated Mapping and Facility Management System - MWW utilizes Hansen "Water" module for work order maintenance

CAPITAL MAIN REHABILITATION -- Programs in place for 50+ years

■ **CLEANING & LINING**

- 1st PROJECT in 1953 7000' of 40 yr 24" PIPE

- TO DATE OVER 100 MILES of 6" - 24" REHABED

- COST EFFECTIVE at \$30-\$35/FT

■ **REPLACEMENT**

- CONDITION SURVEY

- COORDINATE with other PUBLIC AGENCY - MANCHESTER'S CSO

- COST \$70-\$90/FT

PROGRAM GOALS

\$1M ANNUAL BUDGET

2 MILES CLEANED & LINED / YR

1 MILE REPLACED / YR

REHAB ALL PRE - 1935 PIPE by 2020

Historical Operations

(\$ '000's)	1998	1999	2000	2001	2002
Total Revenues	8,568	9,041	8,660	9,202	9,195
Operating Expenses (excluding Depreciation)	5,816	6,120	6,312	6,593	6,607
Net Operating Revenues (before Depreciation)	2,752	2,921	2,348	2,609	2,588
Debt Service (General Obligation)	1,248	1,149	1,232	1,169	1,425
Pay-As-You-Go Capital	3,057	1,492	1,478	1,145	2,508

* Fiscal year ending December 31.

Rates and Charges

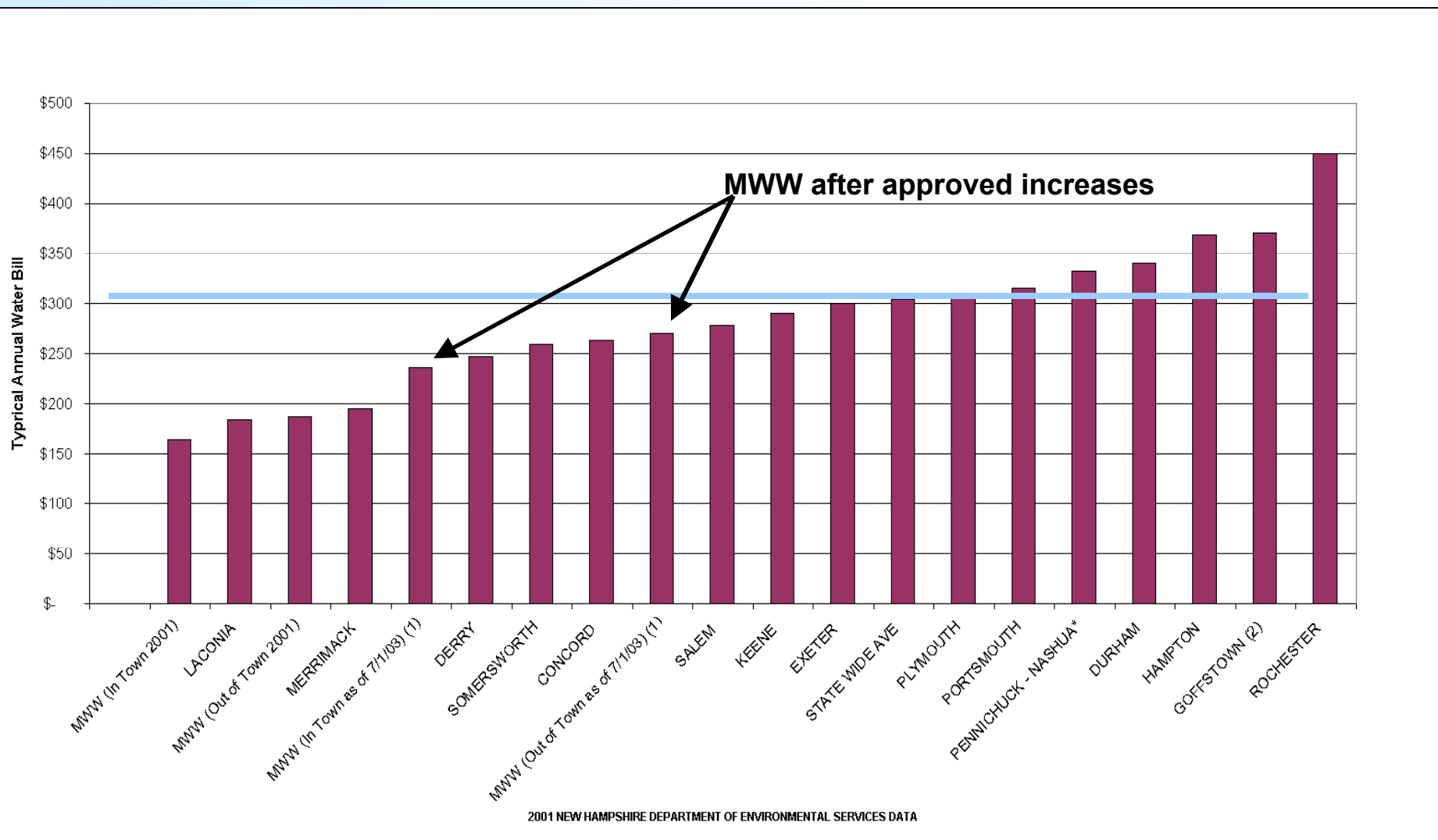
- MWW's Board of Water Commissioners recently approved a multi-year rate increase--**first since 1990**
- Typical annual residential water bill for Manchester household assuming average annual consumption of 134 ccf is \$187.50
- MWW collects 85-90% within 60 days of billing and 100% within 90 days
- All MWW retail and wholesale customers are metered.

Existing Rates (July 1, 2003)	
	Rate/ccf
Retail (In-City)	\$0.94
Retail (Out-of-City)	\$1.07
Wholesale :	
With Fire	\$0.894
Without Fire	\$0.684
Approved Rate Increases	
Effective Date	Rate Increase
January 1, 2004	13.5%
January 1, 2005	11.5%
January 1, 2006	9.5%

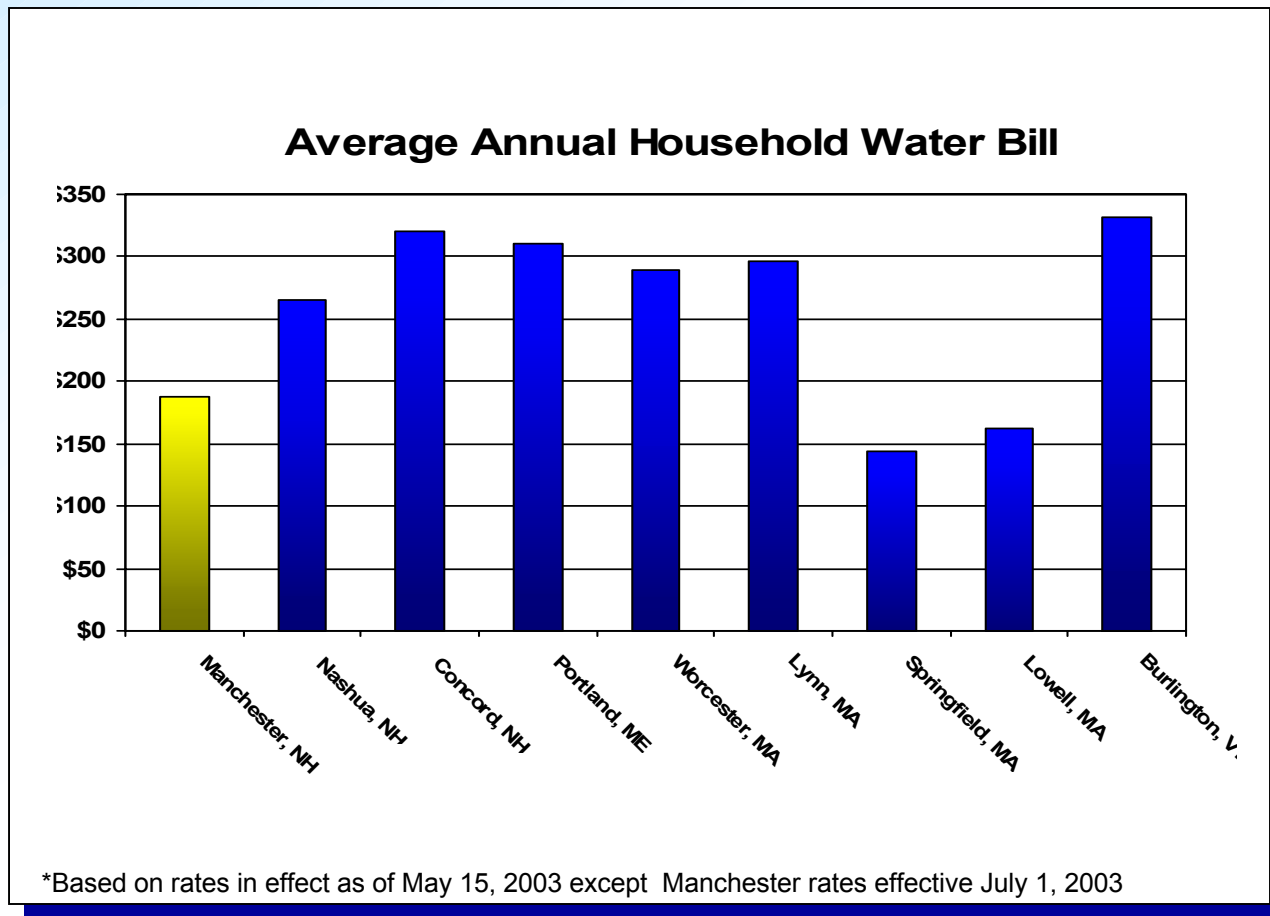
- MWW rate setting process is no longer subject to NHPUC jurisdiction for out-of-town customers, provided that rates are no more than 15% higher than those charged to City residents.

Comparative Water Rates NH Communities

Average Water Rates in NH increased at nearly 4%/ yr during 1990's



Comparative Water Rates Similar Sized Cities



- MWW's rates are competitive with other cities in the northern New England region.

Capital Improvement Program

Capital Improvement Program, 2003-2008 (\$ in 000s)

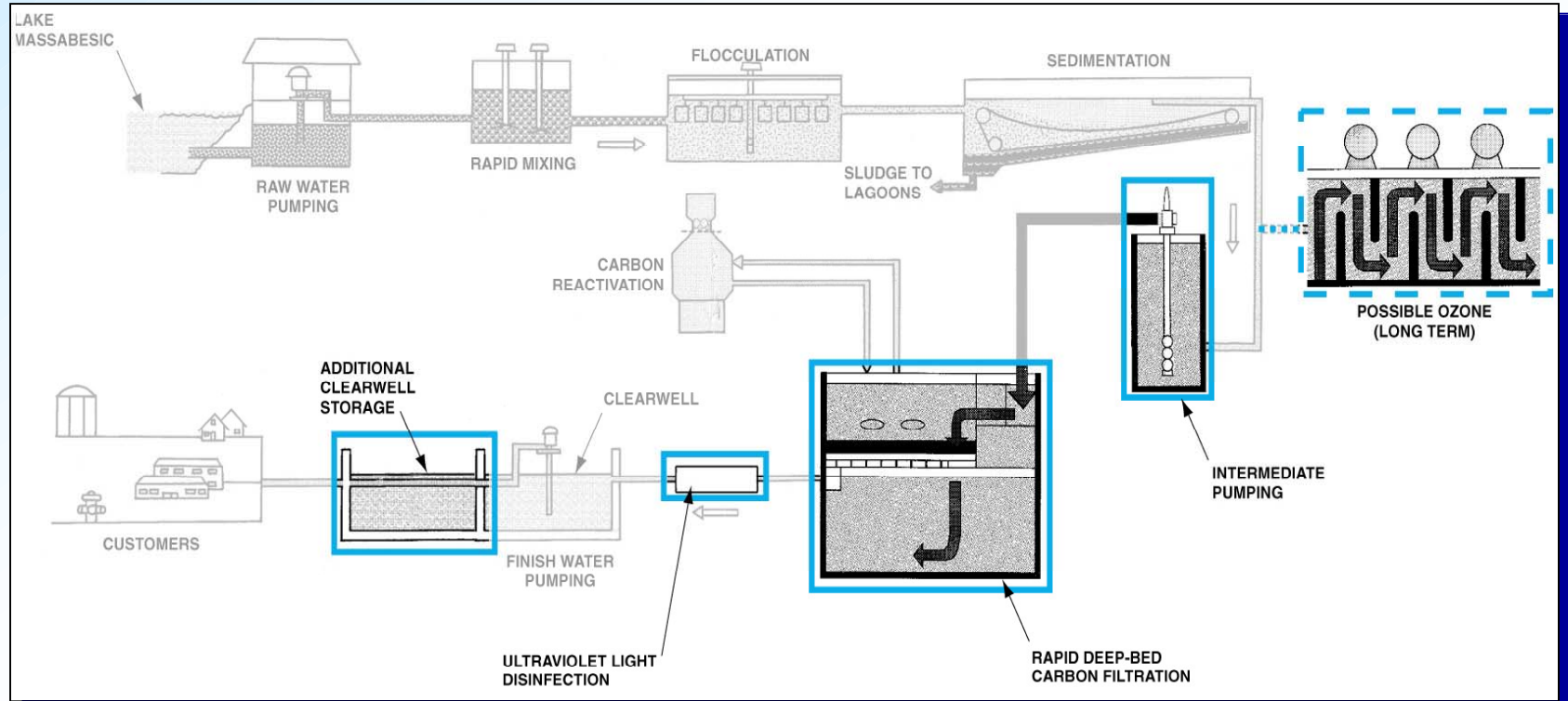
	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>Total</u>
Funding Uses:							
Water Treatment Plant Upgrade	27,274		2,500				29,774
Cleaning and Lining Pipe	430	450	450	450	450	450	2,680
Relay Unlined Pipe	436	450	450	450	450	450	2,686
Hackett Hill Road Storage Tank			1,200				1,200
Goffstown Storage Tank			50	1,250			1,300
Water Treatment Plant UV Disinfection					825	825	1,650
Manchester North River Crossing						1,000	1,000
Merrimack River Supply Project	40		50	75	150	3,000	3,315
Other	<u>544</u>	<u>1,059</u>	<u>484</u>	<u>484</u>	<u>734</u>	<u>684</u>	<u>3,989</u>
Total Uses	28,724	1,959	5,184	2,709	2,609	6,409	47,594

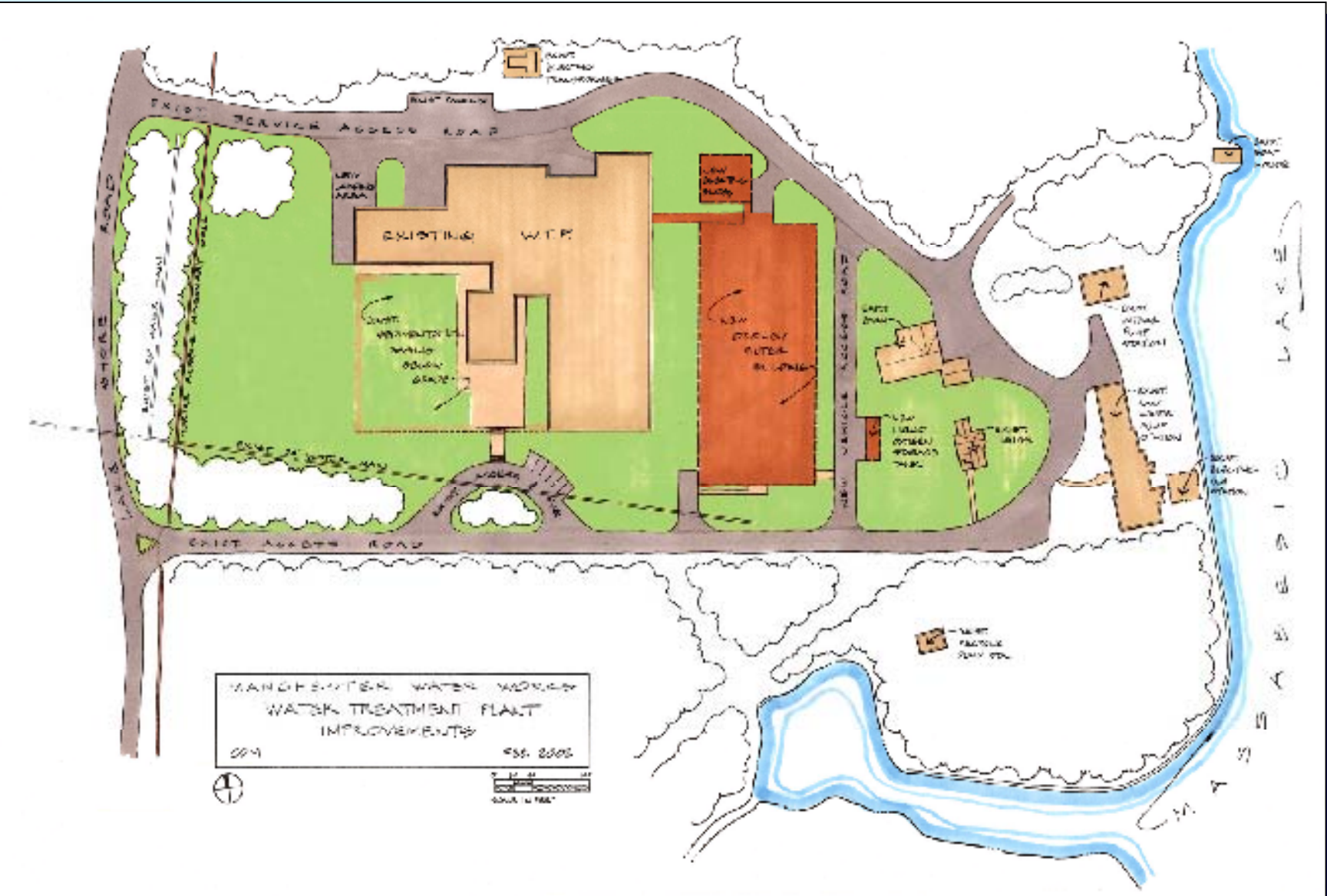
Project Description

Expansion and upgrade of the Lake Massabesic Treatment Plan will increase reliable capacity, improve water quality, ensure continued operating efficiency and reliability

- Proceeds of the Series 2003 Bonds will be used to finance the construction of improvements and upgrades to MWW's existing Lake Massabesic Water Treatment Plant and the distribution system. Plant improvements and upgrades include:
 - Construction of an approximately 28,600 square foot filter and ozone contact building
 - Replacement of all power systems including emergency generator(s), replacement of HVAC equipment, replacement of chemical storage and all feed equipment, renovation of office and lab areas and replacement of all large finished water pumps and electrical motors in the existing Plant structure
 - Conversion of the existing filter area into a nearly 1 million gallon clearwell
 - Provide Security enhancements in accordance with USEPA Vulnerability Assessment recommendations

Proposed Water Treatment Process





Project Funding

Estimated Sources and Uses of Funds

Sources:	
Bond Proceeds: Par Amount	\$ 37,795,000.00
Other Sources of Funds: SRF Monies	2,500,000.00
Total Sources of Funds	\$ 40,295,000.00
Uses:	
Project Fund Deposits:	
Massabesic Treatment Plant Expansion Fund	\$ 27,012,970.93
Massabesic Plant Expansion Funded with SRF	2,499,380.00
Capital Improvements Fund	3,494,594.34
Prior Project Reimbursements	2,000,000.00
	\$ 35,006,945.27
Other Fund Deposits:	
Debt Service Reserve Fund	\$2,943,814.50
Capitalized Interest Fund	1,651,699.62
	\$ 4,595,514.12
Costs of Issuance and Bond Insurance	\$ 692,540.61
Total Uses of Funds	\$ 40,295,000.00

Capital Structure

MWW's Water Revenue Bonds will be senior in priority to existing obligations

- Outstanding general obligation debt of \$10.25* million
- \$2.5 million SRF Loan authority of which \$1.75* million is drawn
- Additional \$2.5 million in SRF loan available in FY 2004 that will partly offset project cost

* effective June 30, 2003

Priority of Payments

Water Revenue Bonds

General Obligation and SRF Debt

Pay-As-You-Go Capital

Legal Requirements

Rate Covenant: The Board of Water Commissioners has covenanted in the Resolution that in each Fiscal Year (i) Revenues Available for Bond Debt Service shall equal or exceed the sum of Required Debt Service Fund Deposits plus deposits required to be made under the Resolution (excluding deposits to the Subordinated Debt Service Fund made from Capitalized Interest, interest or other earnings on the Project Fund, amounts paid from other funds of the Board of Water Commissioners that are not Revenues and are not transferred from other Funds or Accounts established under the Resolution), and (ii) Revenues Available for Bond Debt Service for such Fiscal Year shall equal or exceed 120% of Required Debt Service Fund Deposits.

“Rates and Charges” means all charges, whether denominated as charges, fees, rates, rentals, assessments or otherwise, established by the Board of Water Commissioners for the services provided by the System or for the use or lease of any portion thereof.

Legal Requirements

Bond Security. All Revenues derived from operation of the Manchester Water Works, excluding Merrimack Source Development Charges, Operating Fund, Rebate Fund and Note Payment Fund.

■ Additional Security provided by

- **Debt Service Reserve Fund** - Funded at the lesser of 10% of the aggregate original net proceeds of Series 2003 Bonds Outstanding, (ii) 120% of the average annual aggregate Debt Service on such Bonds, or (iii) the maximum aggregate amount of Debt Service due on such Bonds in any succeeding Bond Year.
- **Operating Reserve Fund** - two months of operating expenses for the current fiscal year
- **Revenue Stabilization Fund** - amount shown in the Operating Budget, then in effect as required to be the balance of the Revenue Stabilization Fund for the Fiscal Year, provided, however, that this amount shall be at least \$500,000 at all times
- **Insurance Reserve Fund** - means \$100,000, unless and until a consultant or an insurance consultant recommends to the City another amount ...as necessary to adequately reserve against risks for which the City does not currently maintain insurance..

Legal Requirements

Additional Bonds. Parity indebtedness are permitted provided among other things that except in the case of refunding bonds , “a Certificate is issued by the Finance Officer, confirmed by the Certificate of an Accountant, certifying that for any period of twelve consecutive months included wholly within the most recent period of 18 consecutive months preceding the date on which such Bonds are to be issued for which such information is available (A) Revenues Available for Bond Debt Service for such period of twelve consecutive months were at least equal to the sum of Required Debt Service Fund Deposits plus deposits required to be made under Section 505(a)(iii) through Section 505(a)(ix) (excluding deposits to the Subordinated Debt Service Fund made from Capitalized Interest, interest or other earnings on the Project Fund, amounts paid from other funds of the City that are not Revenues and are not transferred from other Funds or Accounts established hereunder) for such twelve-month period and (B) Revenues Available for Bond Debt Service for such period of twelve consecutive months were at least equal to 120% of the Required Debt Service fund Deposits on all then Outstanding Bonds for such twelve-month period;”

Pro Forma Revenues and Expenses

	2003	2004	2005	2006	2007	2008
Base Revenues	\$ 9,473,776	\$ 9,565,185	\$ 9,656,595	\$ 9,656,595	\$ 9,656,595	\$ 9,656,595
Projected Rate Increases	608,091	2,553,115	3,845,730	5,036,342	5,036,342	5,036,342
Total Revenues Available	10,081,868	12,118,300	13,502,326	14,692,937	14,692,937	14,692,937
Operating and Maintenance Expenses	7,081,033	7,258,059	7,439,510	7,625,498	7,816,136	8,011,539
Net Revenues	\$ 3,000,835	\$ 4,860,241	\$ 6,062,815	\$ 7,067,439	\$ 6,876,801	\$ 6,681,398
Senior Net Debt Service	0	504,091	1,574,093	1,574,093	1,574,093	1,574,093
Senior Debt Service Coverage Ratio	N/A	964.2%	385.2%	449.0%	436.9%	424.5%
Total Debt Service	\$ 1,389,895	\$ 2,367,279	\$ 3,400,380	\$ 3,425,381	\$ 3,383,425	\$ 3,341,897
Total Debt Service Coverage Ratio	215.9%	205.3%	178.3%	206.3%	203.2%	199.9%

Multi year rate increases have been approved

Conservative revenue projections -- reflecting no growth

O&M increasing at 3 percent annual rate

2003 Series debt service wrapped around existing GO and SRF debt

Feasibility Study Conclusions

■ ***MWW Management Team***

- Seasoned and experienced
- Managed construction of existing WTP, plus other facility upgrades
- Tie to strong City Finance Team
- Balanced staff age distribution

■ ***Existing System and Facilities***

- Water Quality and Supply
- Distribution System

■ ***Capital Improvement Program***

- Historical and ongoing commitment to asset maintenance and forward planning
 - Distribution system rehab program
 - Merrimack Source Development
- Pay-as-you go “bias” for capital needs

■ ***WTP Upgrade Project***

- Project well planned and conceived, with documented need
- Using state of the art, but tested treatment technology
- Contractor with extensive experience and relationship with MWW

Feasibility Study Conclusions (cont'd)

■ ***Projected Revenues and Expenses***

- Multit-year rate increase approved
- Rates will remain affordable
- Modest growth in expenses, including incremental costs of new WTP

■ ***Projected Coverage***

- Developed with conservative assumptions
- Anticipate Senior Coverage well above Resolution requirement, remaining above 3 x through projection period
- Net Revenues in 2006 meet coverage requirement with 2033 Debt Service (max annual debt service)
- Total coverage remains above 170% (2006 Net Revenues, 2033 debt service)

■ ***MWW is well run, nationally recognized water utility***



Arthur Spector

and June Matte